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RANDOM NOTES ON PACIFIC COAST GULLS.

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FROM the ice fields on the north, with the Sabine Gull and Red-legged Kittiwake hovering over the open leads in the pack, to the coast of Mexico, with Heermann's Gull as an ever present feature of the sand beaches, no part of our Pacific coast but can offer gulls in abundance. As yet undisturbed to any extent by the feather hunters, they fairly swarm about the bays and beaches during the winter months, and are but little less noticeable in summer when the nesting birds have retired to the outlying islands, or followed the flocks of geese and cranes to the far north.

No family presents a more interesting study, none are more dainty in plumage, but for some reason there still remains a great deal to be published regarding the life histories of this group. As a rule the species are not easy of identification, even with the bird in hand, a difficulty still further increased when the tyro attempts to segregate the species in a passing flock, presenting different plumages as well as half a dozen or more species of similar size and general appearance. Once having mastered the few difficulties of identification one detects certain characteristics of manner that render most of the species separable with reasonable certainty, even before the markings and other specific characters can be discerned.

In nearly all of the species that have passed under my observation most of these characteristics are of so subtle a nature that I find it well-nigh impossible to define them to my own satisfaction, much less to describe them.

To a casual observer who has seen the gulls of Puget Sound ports contesting with Siwash Indians for garbage, or whose observations have been limited to the gulls that follow the coasting steamers from port to port to feed on the refuse thrown from the galley, the mention of a sea gull suggests nothing so much as a scavenger, on a par with Turkey Vultures and Crows. The other side of the ledger presents a different appearance, for, removed from the degrading influence of garbage dumps, which few if any of our Pacific species seem able to resist, our sea gulls are as dainty and charming in habit and manner as one could wish. *Larus* is, however, an inveterate scavenger, and when found in the region of coast ports can be looked for with certainty about the garbage dumps. I have seen on Puget Sound hundreds of gulls congregated on the dumping grounds, competing with a dozen or more Indians for desirable spoil; the Indians, silent and deliberate, the gulls, clamorous and precipitate, dashing down for choice edibles under the very hands of their human competitors. These conventions were in the winter months and consisted chiefly of Pacific Kittiwake, Glaucous-winged, American Herring, Short-billed, and Bonaparte's, with now and then a Western Gull. They were all equally fearless, and a dozen might have been reached with a stick seven or eight feet long. I doubt, however, that any could have been killed with a stick, for, confiding as they seem, a hostile movement is instantly noted and every gull in the flock as quickly warned. These same birds would be difficult to stalk half a mile from the wharves and shipping; they are quick to learn the limits of protection and by no means averse to accepting the advantages afforded by strict harbor regulations. It is well known that should a gull be shot, whether killed or merely disabled, every gull within sight and hearing will hasten to the spot, and with cries of alarm hover for several minutes over a fallen comrade, nor will they seek safer quarters before a number have been shot. It is a common practice of a certain class of Sunday sportsmen (?) to take advantage of this sympathetic trait, and slaughter wantonly large numbers for the mere sport.

During the winter months companies of from a dozen to forty gulls are in constant attendance on the coasting steamers from Mexico to Puget Sound. These flocks are composed of Western,

Glaucous-winged, Herring, Ring-billed, and Short-billed Gulls. At times the Bonaparte's will join the flock, but not often, as this species seems to prefer the regions of the quiet bays or kelp beds along shore. Along the southern coast Heermann's Gull will be much in evidence, with its slaty plumage and pure white head contrasting strangely with the other species. That some, at least, of these birds follow the vessel for days I have no doubt, for on one occasion I remarked a Glaucous-winged Gull on leaving San Diego. A broken primary hanging from one wing made identification reasonably sure, and for three days the bird was never more than a few hundred yards from the steamer. I lost sight of him at the entrance of San Francisco Bay, and would have been by no means surprised to have found him in the wake of the next steamer bound south. During the summer months there are not so many gulls following the steamers, and those seen are, for the most part, birds of the preceding year. Adults are picked up as the vessel passes the breeding islands but are soon lost again. In sailing off shore also one soon loses the gulls; the large flock picked up at the harbor bar soon begins to drop off, the Ring-bill and other smaller species being the first to leave and the Glaucous-winged and Herring turning back some twenty-five miles at sea, perhaps about the time the saber-like wings of the Black-footed or Short-tailed Albatross are seen on the horizon. I have once or twice picked up a lone Sabine's gull three or four hundred miles off shore, but the vessel offered but a momentary attraction, for after one or two tacks across the wake, as if to read the name and hailing port on the counter, the independent rover was gone.

These same remarks might apply equally to a number of Parasitic Jaegers I have seen after reaching deep water, and the one or two specimens that I secured thus far from shore somewhat upset my previous idea that the bird is entirely parasitic, depending on the gulls and terns for its food; for these deep sea individuals had their stomachs filled to overflowing with fish spawn about the size of No. 5 shot, evidently that of some species spawning on the surface where the bird could pick it up without trouble. I have seen this jaeger in Bering Straits diving for surf smelt, together with Pacific Kittiwakes, but like all of this group, they found it difficult to get below the surface, even with the help of a drop of six or eight feet above

the water, and seldom neglected an opportunity to rob the Arctic Tern or Kittiwake.

In flight all of the species of gulls with which I am familiar habitually carry the feet and tarsi extended behind and closely held along the under surface of the tail-coverts; the feet closed so that the toes and tarsus present an appearance of uniform size throughout the length. The cold winds of winter, however, are apt to be felt by bare feet, and when this happens *Larus* is equal to the occasion; one foot is brought up under the body and the feathers on one side of the belly vigorously kicked forward, the foot and tarsus tucked away out of sight and the feathers allowed to fall back into place. This operation consumes three or four seconds, and it is not until the first foot is snugly tucked away that the other is brought forward to undergo the same process. I have repeatedly witnessed this act during cold winds, and often the gull was but a few feet from me, but so neatly are the feet covered that I could never detect the slightest disarrangement of the plumage or other indication of the hidden members after the feathers had resumed their normal position.

Another feat that I have often witnessed, and as often marveled at, is the ease and grace with which a gull will scratch its head with its foot, or even dislodge a parasite from under its wing with its bill without in any way disturbing its flight. The scratching, which is a very common habit, is accomplished by reaching well back under the wing with the head and forward with the foot, while the wings are held in the normal position and the bird sails.

During the summer months, when herring are running along the coast of southern and Lower California, their migrations are accompanied by every sea bird of the region. In the neighborhood of large schools will be found hundreds of Brandt's and Farralone Cormorants, California Brown Pelicans, Western and Heermann's Gulls, as well as several species of terns and shearwaters, that may be found at that season. It is only when the fish are driven to the surface, by predaceous fish from below or by the cormorants and shearwaters — the only birds above mentioned that seek their food by diving — that the gulls can in any way secure them, and even then they would stand but a small chance were it not for the crowded masses that are at such times driven fairly out of the water. The

Heermann's Gull is by far the most active and successful in catching small fish from the surface, but as a rule will seldom attempt to catch his own dinner if there are any pelicans among the delegates to the convention. There are times when the herring are so thick and so driven from below by the large fish that the pelicans will sit on the surface and snap them up without plunging, as is their normal method, from a height of from ten to thirty feet in the air. If the fish are swimming the deep plunge often carries the bird completely under the surface, and when a second later he bobs up like a cork, he is sure of finding at least one, often two Heermann's Gulls expectantly awaiting the result. If there are two they will usually take up stations on each side and but a foot in front of the pelican, which still holds its huge bill and pouch under the water. It may be that the pelican does not yet know the result of his efforts, for in plunging the pouch it used as a dip net and, if nothing else, it is full of water, which is allowed to escape past the loosely closed mandibles until, perhaps five or ten seconds after the bird made his plunge, a flutter is seen in the pouch, announcing one or more struggling victims. It is still an open question, however, whether they will be eaten by the gull or the pelican, and the latter is seemingly well aware that a herring in the gullet is worth two in the pouch, for it will often wait several seconds for a favorable opportunity for disposing of the catch; the gulls meantime constantly uttering their nasal whining note and keeping well within reaching distance of the pouch. When the critical moment arrives the pelican throws the bill up and attempts to swallow the fish but, with cat-like quickness, one or both gulls make a similar effort, and should the fish in its struggles have thrust its tail or head past the edges of the mandibles, as very often happens, it is an even chance that the gull gets the prize; in fact, I have often seen a Heermann Gull reach well into the pouch and get away with a fish in the very act of slipping down the throat of the pelican. I remember a very amusing incident of this nature I once witnessed on the coast of Lower California. The pelican, after securing a herring, 'backed water' until it was supposed to be far enough from its parasite to venture swallowing it, but as the huge bill was tipped up and opened the gull plunged forward and thrust its entire head and neck into the pouch; the pelican, somewhat quicker than most of its kind,

closed down with a snap and caught the intruder, which in turn had caught the fish; neither would yield any advantages gained, and for perhaps half a minute the pelican towed the gull about by the head, amid most violent protest from a hundred or more gulls assembled, while other pelicans sat like solemn judges, perhaps offering to arbitrate the question. At last a more violent twist than usual on the part of the gull freed him from limbo, minus a few feathers, but in no manner daunted, for a moment later it was following closely in the wake of the same pelican, waiting for it to plunge for another fish, and I never did learn which really swallowed the one in controversy. There would seem to be a certain amount of proprietorship exercised on the part of the gulls over the pelican selected, for they will follow for hours the same bird, and though a hundred or more may be fishing in the same flock they will each be in a great measure attended by one or two, seldom more, gulls, and little attempt is made to leave one pelican in favor of another; such abandoned birds are usually those that have become satisfied and are no longer fishing. I have on several occasions seen large flocks of pelicans fishing at night and the whining cat-like cry of the Heermann's Gull proved that it was, as always, on hand to get his share. The Western Gull will sometimes attempt to emulate the Heermann's, but his greater bulk renders him comparatively harmless to the pelican.

When herring are swimming in compact schools near the surface both Heermann's and Western Gulls secure them by approaching the school from behind and flying near the surface of the water, making repeated, quick dips into the school. The fish seek safety in the depths the instant anything occurs to alarm them, but soon return to the surface, so that the gulls by stalking them from the rear are enabled to approach quite near before the fish are alarmed. As soon as the limits of the school has been passed the gull, rising higher in the air, returns by a wide circuit and again passes over the school from the rear. As the fish all swim in one direction, in a compact mass, these tactics afford the gulls a decided advantage, which seems to be thoroughly understood. I think that the Heermann's Gull secures about one out of five fish that are snapped at and the Western half as many. Royal Terns and the other gulls employ these same methods but to a less extent.

I have often seen gulls of different species on finding a clam on the beach, which was not to be opened by vigorous hammering, carry the bivalve up twenty-five or thirty feet and let it drop. Evidently the bird had the principle but lacked application, for the clam was as often dropped on a soft sand beach as otherwise, and after repeated attempts the gull seemed unable to understand why the shell was not broken. Possibly a few yards distant a rocky beach would have furnished all that was necessary to make the effort successful. On the other hand, I have seen a gull seemingly reason out a more difficult problem, more difficult because not such as would often confront a gull in a state of nature.

I was one day watching some Western Gulls, a few yards from me on a wharf, when a large piece of salted fish was thrown out from an adjacent boat house. It fairly glistened with a thick incrustation of salt, and I was somewhat curious to see if the gulls would eat food so highly seasoned. No sooner had it fallen than it was siezed upon by a gull and as quickly swallowed; but from the surprised actions of the bird it was evidently not to his liking; no sooner had it reached the stomach than it was ordered out again. Dropping the fish on the wharf, the bird eyed it for a moment, turning its head from side to side, and, to judge from its soliloquy, made a number of uncomplimentary remarks on the depraved tastes of mankind that would spoil good fish in that manner. Then picking up the fish it flew down to the water and holding it under the surface shook its head from side to side violently 'sozzeling' the meat about for several seconds. It was then taken back to the wharf, laid down and inspected, and carefully sampled; this time, however, it was not bolted as at first but held for a moment in the mouth and again rejected, and carried back to the water where it was even more roughly laundered. This operation was repeated several times and the piece of fish, which must have weighed four ounces at the outset, was reduced to half that size before it reached a state of freshness that suited the palate of the gull.

During the nesting season the gulls of our Pacific coast play sad havoc with the eggs and young of nearly all of the species of sea birds that nest in exposed situations; nor are the auks and petrels in their burrows immune, for I have seen a Western Gull pull a Cassin's Auklet from a somewhat more shallow burrow than usual

and swallow it with the same gusto and apparent relish with which it bolted the egg a moment later.

It is among the cormorants, however, that the greatest slaughter takes place, and not only are the eggs eaten, but the young are well grown before it is safe for the parents to leave them to brave the *bête noire* of cormorantdom — *Larus*. The advent of man in the region of a cormorant rookery is hailed with delight by every gull on the island but to the poor cormorant it is a calamity of the darkest hue. As the frightened birds leave the nests, which have so far never been for a moment left without the protection of at least one of the parents, the screaming gulls descend in swarms to break and eat the eggs or kill the young, as the case may be. Small cormorants are bolted entire despite their somewhat half-hearted protest; larger birds are dismembered by two gulls assisting in the operation, after the well known manner of barnyard chicks with a worm, and before the adult cormorants have recovered from their fright and returned to protect their homes a colony of several hundred nests will be almost destroyed. I have found young Western Gulls feasting on cormorant squabs half a mile or more from the nests from which they had been abducted.

That gulls drink sea water and can thrive on it, is a fact not to be questioned, but I am of the opinion that when fresh water can be obtained without too much trouble they will drink it in preference. Several years ago I camped for a few days on the beach near a small fresh-water pond; during my stay sea gulls were constantly flying in from sea to drink, bathe, and preen their feathers. Many single birds were noted flying from as far out as the eye could reach direct to the pond; after a few moments of rest and a drink, they returned to the sea in a manner that very plainly indicated that they had business there and had happened in merely to get a little fresh water. It is true, that at this time, the wind was kicking up moderate sea, and while I have seen gulls resting on the waves when they were worse, they do not enjoy rough water, and may have been influenced by the weather conditions more than I supposed.

While the sea gull may have spent the day clam hunting on the mainland beaches, as soon as night falls instinct prompts it to seek an island on which to spend the night. In calm weather the dense kelp beds along the coast of southern California and Lower

California furnish roosting places for numbers of gulls, terns and cormorants, as well as a few herons and shore birds, but the large majority will, if an island is within thirty miles, wing their way to its shelter. Many of their most favored roosting places are but little if any used as nesting grounds.

Some of these winter resorts that I have visited on the coast of Lower California are deserving of more than passing notice. San Geronimo and Natividad Islands are typical of this class. Both are rather low, sandy islands, almost entirely devoid of vegetation of any kind. A person nearing these islands in the afternoon will notice, while still thirty miles or more distant, long, straggling flocks of cormorants, loose, scattered companies of gulls, and small military squads of California Brown Pelicans, all converging toward one point. As the island grows larger and the sun sinks lower birds become more and more plenty, flocks hurry by with greater frequency and with an air of business that has not marked their actions earlier in the day.

The first cormorants will arrive at the island as early as four o'clock, and taking up their station well back from the beach will be joined by the next flock. The black patch on the gray sand extends its outposts until it meets the brown borders of the pelican colony on the one side, and the snowy expanse of gulls on the other, completely surrounding them and forcing later arrivals of gulls and pelicans to start other camp grounds further along. These again are overtaken and surrounded until by dusk the entire side of the island will be one solid mass of closely packed birds, the white of the gulls and brown plumages of the pelicans standing out in striking contrast to the inky blackness of the cormorants which form over three quarters of the mass. The species all flock separately so far as is possible, and the result is a patchwork of white and gray separated by broad zones of black; even the Brandt's and Farallone Cormorants roost apart, with the somewhat rare Baird's Cormorant still further removed, perching on the low cliffs and rocks along the beach. Stragglers arrive until late in the night; the gulls, in fact, do not all get home until the first of the early risers begin to leave at daybreak. The departure is even more gradual if possible than the arrival of the night before, and it is not until the sun is two hours high that the last of the cormorants leave for the fishing grounds.